

Appl. No. 10/725,559
Amdt. Dated April 5, 2005
Reply to Office Action of February 17, 2005

Listing of Claims:

1-7. (Canceled)

8. (Currently amended) An apparatus for producing plastic panels which are provided on at least one side with at least one integral undercut attachment, wherein said apparatus comprises
an extruder,

a die, and

at least one roll nip formed by at least two rolls,

wherein the die and the at least one roll nip cooperate so that molten polymer can be fed through said die to said at least one roll nip,

wherein at least one of said rolls of said roll nip is provided on the roll circumference with at least one mold which corresponds to said undercut attachment, wherein the at least one mold is provided in at least one molding/demolding strip, wherein said molding/demolding strip has a first non-raised position and a second raised position and wherein the molding/demolding strip is capable of assuming said second position to nondestructively release the at least one undercut attachment ~~attachments~~ of the plastic panel after the at least one undercut attachment has left the at least one roll nip.

9. (Previously presented) The apparatus of claim 8, wherein the at least one molding/demolding strip can be moved radially outward to assume said second position.

10. (Previously presented) The apparatus of claim 8 wherein molds are provided approximately half and half in molding/demolding strips adjacent to each other.

11. (Previously presented) The apparatus of claim 8 further comprising a piston/cylinder arrangement in the rolls wherein the at least one molding/demolding strip is radially movable hydraulically or pneumatically by means of said piston/cylinder arrangement.

12. (Previously presented) The apparatus of claim 8 wherein a roll shell of the rolls has a cross section of a polygon with planar faces, and wherein the at least one molding/demolding strip in said first position bears against at least one of said planar faces via a corresponding planar supporting surface.

13. (Currently amended) The apparatus of claim 8 wherein the at least one mold provided in ~~recessed into~~ the at least one molding/demolding strip has the form of discrete inverted cones or pyramids.

14. (Previously presented) The apparatus of claim 13, wherein the at least one cone- or pyramid-shaped mold is provided as at least one strip-shaped recess arranged transversely to the direction of production of the plastic panel.

15. (Previously presented) The apparatus of claim 8, wherein the apparatus is capable of forming web profiles arranged transversely to the direction of production of the plastic panel.

16-18. (Canceled)

19. (Previously presented) An apparatus for the intermittent production of individual plastic panels, which are provided on at least one side with at least one integral undercut attachment, said apparatus comprising

at least one extruder,

at least one die,

at least one planar plate, wherein the die and the planar plate cooperate so that molten polymer can be fed through said at least one die to said at least one planar plate,

wherein said at least planar plate is a heated plate and is provided with at least one mold which corresponds to said at least one undercut attachment,

at least one planar counter surface,

wherein said planar plate and said planar counter surface cooperate to form a mold cavity corresponding to an individual plastic panel,
wherein said at least one mold of said planar plate is provided in at least one molding/demolding strip which is arranged on said planar plate and wherein said molding/demolding strip has a first non-raised position and a second raised position, wherein the molding/demolding strip is capable of assuming said second position to nondestructively release the at least one undercut attachment of said plastic panel from said planar plate.

20. (Previously presented) The apparatus of claim 8, wherein said plastic panels are made from thermoplastic material.

21. (Previously presented) The apparatus of claim 8, wherein the thermoplastic material is polyethylene, polypropylene, PVC, PVDF, ETFE or E-CTFE.

22. (Previously presented) The apparatus of claim 8, wherein the longitudinal axis of the at least one molding/demolding strip is substantially parallel to the axis of said at least one roll.

23. (Previously presented) The apparatus of claim 8, wherein the at least one mold is undercut cylindrically, with positive or negative taper, pyramid shaped or a combination thereof.

24. (Previously presented) The apparatus of claim 8, wherein said at least one roll is temperature controlled.

25. (Previously presented) The apparatus of claim 24, wherein said at least one roll comprises at least one cooling device that substantially cools the entire surface of said roll.

26. (Previously presented) The apparatus of claim 25, wherein said at least one cooling device is a cooling bore.

27. (Previously presented) The apparatus of claim 12, wherein said at least one roll comprises cooling bores that are arranged alternating with said planar faces.

28. (Previously presented) The apparatus of claim 8, wherein said at least one molding/demolding strip is removably installed.

29. (Previously presented) The apparatus of claim 19, wherein said plastic panels are formed from polymer granules.

30. (Previously presented) The apparatus of claim 8, wherein the apparatus includes multiple molding/demolding strips, which are arranged over the circumference of the said at least one roll.

31. (Previously presented) The apparatus of claim 22, wherein the apparatus includes multiple molding/demolding strips, which are arranged over the circumference of the said at least one roll.

32. (Currently amended) An apparatus for the production of individual plastic panels, which are provided on at least one side with at least one integral undercut attachment, said apparatus comprising

at least one extruder,

at least one die,

at least one molding means for receiving molten polymer from said die,

at least one counter molding means for interacting with said molding means to form said plastic panels therebetween,

wherein said at least one molding means is provided with at least one mold which corresponds to said at least one undercut attachment, said at least one mold being provided in at least one molding/demolding strip which is arranged on said at least one molding means and wherein said at least one molding/demolding strip has a first non-raised position and a second raised position,

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wherein the at least one molding/demolding strip is capable of assuming said second position to nondestructively release the undercut attachment of the plastic panel from said planar plate.